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| PRE-APPEAL BRIEF REQUEST FOR REVIEW   |  | Docket Number (Optional)<br>965.1002   |                       |
|---|--|--|-----------------------|
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|   | First Named Inventor<br>Lars Friedrich |  |                       |
|   | Art Unit<br>3663                       | Examiner<br>Eric L. Bolda  |                       |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s).<br/>Note: No more than five (5) pages may be provided.</p>      |  |  |                       |
| I am the  |  |  |                       |
| <input type="checkbox"/> applicant/inventor.  | Signature                              |  |                       |
| <input type="checkbox"/> assignee of record of the entire interest.<br>See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.<br>(Form PTO/SB/96)   | Russell D. Culbertson                  |  |                       |
| <input checked="" type="checkbox"/> attorney or agent of record.<br>Registration number 32,124  | Typed or printed name                  |  |                       |
| <input type="checkbox"/> attorney or agent acting under 37 CFR 1.34.<br>Registration number if acting under 37 CFR 1.34 _____   | 512-327-8932                           |  |                       |
|   | Telephone number                       |  |                       |
|   | July 14, 2008                          |  |                       |
|   | Date                                   |  |                       |
| NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.<br>Submit multiple forms if more than one signature is required, see below*.   |  |  |                       |
| <input checked="" type="checkbox"/> *Total of <u>One (1)</u> forms are submitted.   |  |  |                       |

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: )  
Lars Friedrich )  
Serial No.: 10/580,351 ) Group Art Unit: 3663  
Filed: May 23, 2006 ) Examiner: Eric L. Bolda  
FOR: METHOD FOR MONITORING AN ) Confirmation No.: 1729  
OPTICAL TRANSMISSION LINE )  
BY MEANS OF AN OPTICAL )  
AMPLIFIER AND OPTICAL )  
AMPLIFIER THEREFOR )

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

This paper is submitted in response to the Final Office Action mailed April 14, 2008, in the above-identified application, and is filed within the three-month shortened statutory period for response set in the April 14, 2008 Final Office Action.

Appellants request review of the final rejection in the above-identified application. No amendments are being filed with this request and this request is being filed with a Notice of Appeal. The review is requested for the reasons stated in the following remarks.

Before reaching the reasons for the present request, the Appellant first notes that the current Final Office Action in the case mailed April 14, 2008 (the "Current FOA") does not specifically make a Section 112 rejection, but just responds to the Appellant's arguments

1 submitted in response to the first Final Office Action mailed January 9, 2008 (the "First FOA").  
2 For purposes of appeal the Appellant assumes that the Current FOA intended to state the Section  
3 112, ¶1 rejection of claims 15-33 as set out in the First FOA.

4 Based on the assumption set forth in the preceding paragraph, the Current FOA applies  
5 two rejections. Claims 15-33 are rejected under 35 U.S.C. §112, ¶1 for lack of enablement and  
6 claims 15-33 are rejected under 35 U.S.C. §103(a). All of the Section 103 rejections rely  
7 ultimately on the combination of U.S. Patent No. 7,031,049 to Kamada et al. ("Kamada") and  
8 U.S. Patent No. 6,373,621 to Large et al. ("Large").

9 **ISSUES TO BE CONSIDERED IN THIS REVIEW**

10 The Appellant requests two issues be considered in this review. The first issue is whether  
11 the present application provides an enabling disclosure in accordance with 35 U.S.C. §112, ¶1 as  
12 to claims 15-33. The second issue is whether the First FOA and Current FOA set forth a  
13 sufficient reason in the prior art to support the proposed combination of Kamada and Large to  
14 reject independent claims 15 and 27 under 35 U.S.C. §103(a).

15 **I. THE CLAIMS ARE ENABLED IN ACCORDANCE WITH 35 U.S.C. §112, ¶1**

16 The Applicant understands the Section 112, ¶1 rejection is based on the fact that the  
17 claims refer to "amplified spontaneous emission" ("ASE") but the disclosure refers only generally  
18 to an optical pump source and does not disclose an optical amplifier employing gain media with  
19 discrete levels.

20 The original specification in the present case discloses at page 4, lines 4-16 that a  
21 sufficiently high pump power is coupled into the transmission line and the resulting ASE signal fed  
22 back in the opposite direction is detected and compared to an expected value to determine

1 whether the transmission line has been interrupted. The disclosure of the present application  
2 further indicates at page 8, lines 20-23, that the pump source may comprise one or more lasers. It  
3 is clear from at least this disclosure from the present application that the pump source may  
4 comprise a laser that provides a pump signal at a sufficient power level to produce ASE in the  
5 transmission line. **The Appellant respectfully submits that any person skilled in the art of**  
6 **optical data transmission systems and optical amplifiers would know, or be able to readily**  
7 **identify without undue experimentation, a pump source and pump power required to**  
8 **produce ASE in a given transmission line.**

9 With regard to the meaning of the term ASE in the art, the Appellant has provided the  
10 following definition from the literature.

11 a process where spontaneously emitted radiation (fluorescence) is amplified.  
12 (Encyclopedia of Laser Physics and Technology, RP Photonics Consulting GmbH,  
13 [http://www.rp-photonics.com/amplified\\_spontaneous\\_emission.html](http://www.rp-photonics.com/amplified_spontaneous_emission.html)) (It is noted  
14 that the definition appearing at this Internet address has been changed to refer to  
15 "luminescence" rather than "fluorescence")

16 The Appellant respectfully submits that the above-cited definition unequivocally and clearly  
17 establishes that the term ASE is known in the art to refer to "a process where spontaneously  
18 emitted radiation (fluorescence) is amplified." The Office Actions provide no cite from the  
19 literature that specifically defines ASE as being limited to amplification in media with discrete  
20 levels. Even if such a definition contradicting the above-identified definition existed, it would not  
21 somehow override the above-identified definition and would not render one skilled in the art  
22 incapable of making and using the invention.

1           Given the disclosure in the present application and given the above definition of ASE  
2           appearing in the literature, the Applicant believes that claims 15-33 are enabled by the disclosure  
3           and are not objectionable under Section 112, ¶1.

4           **II. THE REJECTIONS UNDER SECTION 103(a) FAIL TO IDENTIFY ANY REASON**  
5           **APPARENT IN THE PRIOR ART TO MAKE THE PROPOSED COMBINATION**

6           All of the prior art rejection set out in the Current FOA ultimately rely on combining the  
7           pump source modulation of Large with the loss detection system of Kamada. Thus if there is no  
8           reason apparent in the prior art to make that proposed combination, all of the prior art rejections  
9           are in error.

10          The Appellant refers to the response to the First FOA filed March 28, 2008, from page 7,  
11          line 1 to page 8, line 9 for a discussion of Kamada and Large.

12          The First FOA and the Current FOA together propose two rationales for making the  
13          proposed combination of Kamada and Large. The First FOA supports adding the pump power  
14          modulation disclosed in Large with the apparatus of Kamada on the ground that adding the  
15          modulation to the Kamada system would provide unique identification of signals (First FOA at p.  
16          6, ll. 17-20). However, Kamada already includes a loss point detection technique based on unique  
17          identification of signals (Pm/ASS or ASS) at a determination excitation light power level P<sub>jd</sub>.  
18          (Kamada at col. 6, lines 4-25 and col. 8, lines 1-23). There is no suggestion in the prior art that  
19          modulating the excitation power in Kamada as proposed in the First FOA would in any way  
20          improve the loss point detection technique employed in Kamada. Furthermore, since each  
21          embodiment in Kamada specifies raising the excitation light power at a fixed rate from zero while  
22          monitoring the scattered light power or both scattered light power and reflected light power (See

1 Kamada at col. 5, lines 42-48 and col. 8, lines 9-23), the teachings in Kamada would have in fact  
2 dissuaded one skilled in the art from applying the pump power modulation taught by Large during  
3 start up of the loss point detection system in Kamada.

4 The second rationale for adding the modulation taught by Large to the system in Kamada  
5 is set out in the Current FOA at page 4, lines 3-6. Specifically, the Current FOA cites the  
6 Abstract of Large for the proposition that Large teaches that modulation improves the detection  
7 of light at the signal wavelength (i.e. the wavelength of the ASS (scattered) light). The Appellant  
8 respectfully submits that the Abstract in Large simply does not support this proposition and does  
9 not provide any reason to make the proposed combination of Large and Kamada. Furthermore,  
10 the purpose of the pump laser modulation in the Large reference is to facilitate recognizing the  
11 absence of the pump signal originating from a distant pump laser even in the presence of high  
12 levels of noise caused by back scatter from a local pump laser in the system. This has no  
13 application in the Kamada loss point detection system which specifically relies on the back  
14 scattered light signal to detect a loss point in the transmission line.

15 CONCLUSION

16 For all of the above reasons the Appellant respectfully requests reconsideration and  
17 allowance of claims 15-33.

18 Respectfully submitted,

19 The Culbertson Group, P.C.

20  
21  
22 Dated: 14 July 2008

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